

# **Early life influences on child weight outcomes in the Study to Explore Early Development**

**Tanja VE Kral, Jesse Chittams, Chyrise B Bradley, Julie L Daniels, Carolyn G DiGuseppi, Susan L Johnson, Juhi Pandey, Jennifer A Pinto-Martin, Neloufar Rahai, AnnJosette Ramirez, Laura A Schieve, Aleda Thompson, Gayle Windham, Whitney York, Lisa Young and Susan E Levy**

Risk factors for childhood obesity emerge early in a child's life. We examined relations between child weight status at 2-5 years and their mothers' pre-pregnancy weight status and weight gain during pregnancy as well as rapid weight gain during infancy. This was in three groups of children: those with autism spectrum disorder (ASD), developmental delays or disorders (DD), and those from the general population (POP). Using data from the multi-site Study to Explore Early Development (SEED), we obtained maternal and child height and weight data from maternal interviews, medical records or direct measurement. Maternal weight gain during pregnancy was compared to the Institute of Medicine recommendations. Rapid weight gain was based on infants' change in weight from birth to 6 months of age. Mothers across all groups with pre-pregnancy overweight/obesity were almost 2.5 times more likely, and mothers who exceeded the recommendations for weight gain during pregnancy were almost 1.5 times more likely, to have an overweight/obese child than other mothers. Children with ASD showed the highest frequency (44%) of rapid weight gain during infancy and were almost 3.5 times more likely to be overweight/obese as children with ASD without rapid weight gain. Helping mothers achieve a healthy pre-pregnancy weight status and appropriate weight gain during pregnancy are important targets for all children and families. Healthy infant growth patterns carry special importance for children who are at increased risk for an ASD diagnosis.